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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 4

Complete if Known	
Application Number	10/809,269
Filing Date	03/24/2004
First Named Inventor	Ian G. Brown
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	IB-1888

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number: Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/WHB/	AA	US- RE37,977 E	02/04/2003	Sugihara et al.	
	AB	US- 6,511,817 B1	01/28/2003	Lynch et al.	
	AC	US- 6,448,089 B1	09/10/2002	Vuong	
	AD	US- 6,297,025 B1	10/02/2001	Sugihara et al.	
	AE	US- 6,277,629 B1	08/21/2001	Wolf et al.	
	AF	US- 6,258,229 B1	07/10/2001	Winarta et al.	
	AG	US- 6,151,519 A	11/21/2000	Sugihara et al.	
	AH	US- 6,132,663 A	10/17/2000	Sugihara, et al.	
	AI	US- 6,132,683 A	10/03/2000	Howard III, et al.	
	AJ	US- 6,051,422 A	04/18/2000	Kovacs et al.	
	AK	US- 5,981,268 A	11/09/1999	Kovacs et al.	
	AL	US- 5,810,725 A	09/22/1998	Sugihara, et al.	
	AM	US- 5,810,725 A	08/22/1998	Sugihara et al.	
	AN	US- 5,692,516 A	12/07/1997	Kaneko et al.	
/WHB/	AO	US- 5,563,067 A	10/08/1996	Sugihara et al.	
		US-			
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]-Number[4]-Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/William Beisner/	Date Considered	/William Beisner/

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Sheet 2 ~~1~~ of 4 ~~3~~

Complete if Known	
Application Number	10/809,269
Filing Date	03/24/2004
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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/WHB/	AP	JEROME PINE, "Recording action potentials from cultured neurons with extracellular microcircuit electrodes," J.Neurosci Methods, Vol. 2, p. 19-31, (1980).	
	AQ	M.A. OZHOGHIN ET AL., "Active multimicroelectrodes for neirophysiobiological measurements," Proc. of the 5th Nordic Mtg. on Bed. and Biol. Eng., Linkoping, and the 25th Anniversary Swedish Soc. for Med. Physics adn Med. Eng., Umea 1981 , Vol. 1, p. 158-160, (1981).	
	AR	JAMES L. NOVAK ET AL., "Recording from the Aplysia Abdominal Ganglion with a Planar Microelectrode Array," IEEE Transactions on Biomed. Eng., Vol. 33 (No. 2), p. 196-202, (February 1986).	
	AS	NECHAMA LASSER-ROSS ET AL., "High time resolution fluorescence imaging with a CCD camera," J. Neurosci. Methods, Elsevier Science Publishers B.V., Vol. 36, p. 253-261, (1991).	
	AT	CHI-BIN CHIEN ET AL., "An apparatus for recording synaptic potentials from neuronal cultures using voltage-sensitive fluorescent dyes," J. Neurosci. Methods, Elsevier Science Publishers B.V., Vol. 38, p. 93-105, (1991).	
	AU	LUO LU ET AL., "Diamond-like carbon as biological compatible material for cell culture and medical application," Bio-Med. Materials and Engineering, Elsevier Science, Vol. 3 (No. 4), p. 223-228, (1993).	
	AV	STEVE M. POTTER ET AL., "High-speed CCD movie camera with random pixel selection, for neurobiology research," Proc. SPIE, 22nd Int'l. Congress on High-Speed Photography and Photonics, Vol. 2869, p. 243-253, (May 1997).	
	AW	M.J. IGNATIUS ET AL., "Bioactive surface coatings for nanoscale instruments," J. Biomed. Mater. Research, Vol. 40 (No. 2), p. 264-274, (1998).	
↓	AX	JUERGEN RUEHE ET AL., "Tailoring of surfaces with ultrathin polymer films for survival and growth of neurons in culture," J. Biomater. Sci. Polymer Edn., Vol. 10 (No. 8), p. 859-874, (1999).	
/WHB/	AY	B.V. SARADA ET AL., "Electrochemical Characterization of Highly Boron-Doped Diamond Microelectrodes in Aqueous Electrolyte," Journal of the Electrochemical Society, The Electrochemical Society, Inc., Vol. 146 (No. 4), p. 1469-1471, (1999).	

Examiner Signature	/William Beisner/	Date Considered	10/15/2007

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Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/WHB/	AZ	F. MAMMANO ET AL., "An optical recording system based on a fast CCD sensor for biological imaging," Cell Calcium, Harcourt Brace & Co. Ltd, Vol. 25 (No. 2), p. 115-123, (1999).	
	BA	G. SCHMITT ET AL., "Passivation and corrosion of microelectrode arrays," Electrochimica Acta, Pergamon, Vol. 44, p. 3865-3883, (1999).	
	BB	MICHAEL J. SCHOENING, "Silicon recognizes biochemical parameters: Microchips for analytical sensor applications," American Laboratory, Vol. 32 (No. 18), p. 24-31, (September 2000).	
	BC	B. HORWITZ ET AL., "Neural modeling and functional brain imaging: an overview," Neural Networks, Pergamon, Vol. 13, p. 829-846, (2000).	
	BD	STEVEN R. YOUNG ET AL., "Simultaneous intracellular recording and calcium imaging in single neurons of Hippocampal Slices," Methods, Academic Press, Vol. 21, p. 373-383, (2000).	
	BE	TIMOTHY D. STRONG ET AL., "A microelectrode array for real-time neurochemical and neuroelectrical recording in vitro," Sensors and Actuators, Elsevier Science B.V., Vol. A 91, p. 357-362, (2001).	
	BF	IAN G. BROWN ET AL., "Large Patterned Networks of Living Neurons," LDRD 2001 Annual Report, Accelerator and Fusion Research Division, Lawrence Berkeley National Laboratory, (March 25, 2002).	
	BG	PETER FROMHERZ, "Electrical interfacing of nerve cells and semiconductor chips," ChemPhysChem, Wiley-VCH-Verlag GmbH (Weingeim, Germany), Vol. 3, p. 276-284, (2002).	
	BH	A. ERLICHER ET AL., "Guiding neuronal growth with light," PNAS, Vol. 99 (No. 25), p. 16024-028, (December 10, 2002).	
/WHB/	BI	ASTRID A. PRINZ ET AL., "Effect of neuritic cables on conductance estimates for remote electrical synapses," J. Neurophysiol., The American Physiological Society (first published December 18, 2002), Vol. 89, p. 2215-2224, (2003).	

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Sheet 4 ~~3~~ of 4 ~~3~~

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/WHB/	BJ	STEPHEN M. LAWRENCE ET AL., "Fabrication and characteristics of an implantable, polymer-based, intrafascicular electrode," J. Neurosci. Methods, Elsevier B.V., Vol. 131, p. 9-26, (2003).	
/WHB/	BK	R. Alexander Kaul et al., "Neuron-Semiconductor Chip with Chemical Synapse between Identified Neurons," Physical Review Letters, The American Physical Society, Vol. 92, No. 3, p. 038102.1-038102.4, (2004).	

Examiner Signature	/William Beisner/	Date Considered	10/15/2007

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